

# Radiation Assessment Identification and Detection (RAID) System

## Overview

The Radiation Assessment Identification and Detection (RAID) system developed by Sandia National Laboratories (SNL) detects and identifies radioactive materials moving past the detection unit. It can be located at control points in facility entrances, passenger terminals, vehicle border crossings, package/mail distribution centers and maritime ports. It also can be configured for use in other portal scenarios.

## Technology

The RAID system is currently configured to provide the following:

- Detection of gamma-ray emitting materials passing within several meters of the detector by sodium iodide spectrometers
- Isotopic identification of the materials detected, including mixed sources, and classification of the materials as *Natural*, *Medical*, *Industrial* or *Special Nuclear Material* (SNM)
- Automatic analysis of shielded materials
- Capture and display of a video image of the persons/containers present at the time of detection
- Transmission of analytical results and video image to a base station computer by means of radio-frequency (RF) modem
- Log of activity including images and analysis results

RAID is a follow-on to similar systems previously fielded at several locations to collect baseline data on the variety of sources present in normal commerce and activities.



## Performance

RAID provides exceptional and unique radiation measurement and analysis capabilities. SNL continues to make improvements in both radiation detection and analysis techniques for a variety of applications.

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